



Michigan Department of Natural Resources
Wildlife Division Report No. 3536
May 2012

Printed by Authority of: P.A. 451 of 1994
Total Number of Copies Printed:25
Cost per Copy:\$1.61
Total Cost:\$40.25
Michigan Department of Natural Resources

2010 BEAR HARVEST REPORT FOR THE RED OAK BEAR MANAGEMENT UNIT

Brian J. Frawley

ABSTRACT

A study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (study area) represented 5% of the area of the Red Oak Bear Management Unit (BMU), yet about 22% of the black bears registered from the Red Oak BMU since 2000 were taken in the study area. Hunters with a bear hunting license valid in the Red Oak BMU were contacted after the 2010 hunting season to determine hunter participation, hunting methods, bear harvest, and hunter satisfaction among hunters in the Red Oak BMU. This information could be used to assess whether the study area should be managed independently from the remainder of the Red Oak BMU. In 2010, an estimated 859 hunters spent 4,512 days afield and harvested about 263 bears in the Red Oak BMU. About 31% of hunters harvested a bear. Hunter success and the effort required to harvest a bear was not significantly different inside and outside the study area. Bear hunters in the study area more often hunted on private land only (85% versus 42%), and they more often harvested a bear on private land than hunters outside the study area (88% versus 48%). A slightly higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (97% versus 88%). A greater proportion of hunters inside the study area rated their opportunities for taking a bear as very good or good than among hunters outside the study area (31% versus 22%). Hunters in the study area experienced less interference from hunters (all types of hunting) than among hunters outside the study area (21% versus 31%). Furthermore, fewer hunters in the study area experienced interference with another bear hunter than among hunters outside the study area (11% versus 23%).



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

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INTRODUCTION

Beginning in 1990, the Michigan Department of Natural Resources (DNR) created black bear (*Ursus americanus*) management units (Figure 1), including the Red Oak Bear Management Unit (BMU), and limited the number of bear hunting licenses issued for each unit. The DNR annually sets license quotas for each management unit and allocates licenses among eligible applicants.

During 2000-2010, nearly 22% of the black bears registered from the Red Oak BMU were taken in the study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (Figure 2). In 2010, this study area represented 5% of the area of the Red Oak BMU. Thus, the study area has been contributing disproportionately to the harvest within the Red Oak BMU. Furthermore, the proportion of bears taken from the study area has been generally increasing since 1990 (Figure 3).

In 2010, bear could be hunted in the Red Oak BMU during September 17-25 and October 8-14. Bear could be harvested with a firearm, crossbow, or archery equipment, except for the special archery-only hunt during October 8-14. Hunters 10-years-old or older could use a crossbow to hunt bear. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit did not need the stamp.

Hunting licenses were valid on all land ownership types and allowed a hunter to take one bear of either sex, excluding cubs and female bears with cubs. Hunters could use bait throughout all hunting periods, but dogs could be used only during September 18-25 (i.e., prior to the archery-only season). Furthermore, the first day of hunting in the Red Oak BMU was restricted to hunting with bait only (i.e., September 17), and the last two days were restricted to hunters using dogs (i.e., September 24-25). All successful bear hunters were required to present their harvested bear at a registration station. (A tally of the registration data is not presented in this report.)

The DNR and Natural Resources Commission have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest and opinion surveys are some of the management tools used by the DNR to accomplish its statutory responsibility. Our objectives were to estimate hunter participation and success in the Red Oak BMU and inside and outside the study area within the BMU. This information could be used to assess whether the study area should be managed separately from the remainder of the Red Oak BMU.

METHODS

Following the 2010 bear hunting season, a questionnaire (Appendix A) was mailed to 915 people that had purchased a bear hunting license valid for the Red Oak BMU (resident, senior, nonresident bear licenses, and comprehensive lifetime license). The people selected for the sample were bear hunting license buyers that had not previously reported their hunting activity online for the annual statewide bear harvest survey (Frawley 2011). Hunters reported whether they hunted, number of days spent afield, whether they harvested a bear, date of

harvest, and their hunting methods. Hunters also reported whether other hunters (including bear hunters) caused interference during their hunt. Successful hunters were asked to report harvest date, sex of the bear taken, and harvest method. All hunters were asked to rate their hunting experiences.

Estimates were calculated using a simple random sampling design (Cochran 1977). The mean number of days required to harvest a bear was calculated using the number of bears registered by hunters at mandatory check stations as an auxiliary variate (ratio estimator).

A 95% confidence limit (CL) was calculated for each estimate. In theory, the CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating that the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during late November 2010, and up to two follow-up questionnaires were mailed to nonrespondents. Although 915 people were sent the questionnaire, 11 surveys were undeliverable, resulting in an adjusted sample size of 904. Questionnaires were returned by 721 people, yielding an 80% adjusted response rate.

RESULTS

In 2010, 1,027 bear hunting licenses were purchased for the Red Oak BMU. Nearly $94 \pm 1\%$ of the license buyers hunted bear (Table 1). These hunters spent 4,512 days afield ($\bar{x} = 5.3$ days/hunter) and harvested 263 bears. The average number of days required to harvest a bear in the Red Oak BMU was 17.2 days in 2010.

About $23 \pm 1\%$ of the bear hunters in the Red Oak BMU hunted within the study area (202 hunters, Table 1). These hunters spent 1,075 days afield ($\bar{x} = 5.3$ days/hunter) and harvested 66 bears. The average number of days required to harvest a bear in the study area was 16.3 days. An estimated $79 \pm 1\%$ of the bear hunters in the Red Oak BMU hunted outside the study area (681 hunters). These hunters spent 3,437 days afield ($\bar{x} = 5.0$ days/hunter) and harvested 197 bears. The average number of days required to harvest a bear outside the study area was 17.5 days, which was not significantly different than the effort required in the study area.

About 50% of the bear hunters in the Red Oak BMU hunted on private lands only, 31% hunted on public lands only, and 12% hunted on both private and public lands (Table 2). Among bear

hunters hunting within the study area, 85% hunted on private lands only, 13% hunted on public lands only, and 1% hunted on both private and public lands. In contrast, 42% of hunters pursuing bears outside the study area hunted on private lands only, 37% hunted on public lands only, and 9% hunted on both private and public lands. The proportion of hunters using private lands was significantly greater among the hunters in the study area than for hunters outside the study area.

Bear hunters in the Red Oak BMU spent 2,381 days afield on private land, 1,537 days hunting on public land only, and 510 days hunting on both private and public lands (Table 3). Bear hunters active in the study area spent 929 days afield on private land, 114 days hunting on public land only, and 14 days hunting on both private and public lands. In contrast, hunters pursuing bears outside the study area hunted 1,452 days on private lands, 1,423 days on public lands, and 496 days hunting on both private and public lands.

Of the estimated 263 bear harvested in the Red Oak BMU in 2010, 58% of these bears (152) were taken on private land (Table 4). About 42% of the bears (110) were taken on public land. About 88% of the bears taken within the study area and 48% of the bears taken outside the study area were taken on private lands, which was significantly different.

Nearly 31% of hunters harvested a bear in the Red Oak BMU (Table 1); however, hunter success was not significantly different inside compared to outside the study area (33% versus 29%). About 48% of the bears taken in the Red Oak BMU were harvested during the first two days of the hunting season (Figures 4 and 5). Only about 12% of the harvested bear were taken in the last portion of the season (October 8-14). About 53% of the bears taken in the Red Oak BMU were males (140) and 47% were females (123; Table 5). Reported sex of harvested bears did not vary significantly inside and outside the study area.

Most hunters in the Red Oak BMU (83%) used only firearms while hunting bear (Table 6). A slightly higher proportion of the bear hunters in the study area used firearms to hunt bears than hunters outside the study area (86% versus 82%). Most hunters in the Red Oak BMU (83%) used a firearm to harvest their bear (Table 7). Most hunters in the Red Oak BMU (90%) relied primarily on baiting as a means of locating and attracting bears (Table 8). A slightly higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (97% versus 88%).

About 84% of the harvested bears in the Red Oak BMU were taken with the aid of bait only (Table 9). A higher proportion of bear harvested in the study area were taken with the assistance of bait only than the bear harvested outside the study area (94% versus 80%). Hunting success for hunters using bait only in the Red Oak BMU was 29%, while hunting success for hunters using dogs was 46% (Table 10). Success among hunters using bait only was similar among hunters inside and outside the study area (32% versus 28%).

About 27% of hunters in the Red Oak BMU rated the number of bear seen as very good or good and 43% rated the number of bear seen as poor or very poor (Table 11). Furthermore, 24% of hunters in the Red Oak BMU rated their opportunities for taking a bear as very good or good and 44% rated their opportunities as poor or very poor (Table 11). A greater proportion of hunters inside the study area rated their opportunities for taking a bear as very good or good

than among hunters outside the study area (31% versus 22%).

About 44% of hunters in the Red Oak BMU rated their hunting experiences as very good or good and 34% rated their hunting experiences as poor or very poor (Table 11). Fewer hunters inside the study area rated their hunting experience as poor or very poor than among hunters outside the study area (17% versus 35%).

Hunter satisfaction is affected by many factors such as hunting success and whether hunting activities were completed without interference. Nearly 28% of the hunters in the Red Oak BMU were interfered with by other hunters (Table 12). Most of this interference was caused by another bear hunter; 21% of the hunters reported that other bear hunters interfered with their hunt. Hunters in the study area experienced less interference from hunters (all types of hunting) than hunters outside the study area (21% versus 31%). Furthermore, fewer hunters in the study area experienced interference with another bear hunter than hunters outside the study area (11% versus 22%).

DISCUSSION

The differences between many estimates for the study area and the remainder of the Red Oak BMU likely reflect differences in land ownership patterns. About 95% of the study area was privately owned, while 65% of the area outside the study area was private lands. Thus, a greater proportion of hunters used private lands and took bears on private lands in the study area because these hunters were more dependent on private lands for hunting opportunities. In addition, interference among hunters was less frequent in the study area because private landowners likely limited hunter numbers on their properties.

ACKNOWLEDGEMENTS

I thank all the bear hunters that provided information. Autumn Feldpausch, Jamie Fuller, Theresa Riebow, and Hannah Schauer completed data entry. The figure of bear management units and the area open to hunting was prepared by Marshall Strong. Adam Bump, Val Frawley, Russ Mason, Cheryl Nelson, and Doug Reeves reviewed a previous version of this report.

LITERATURE CITED

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- Frawley, B. J. 2011. 2010 Michigan black bear hunter survey. Wildlife Division Report 0000. Michigan Department of Natural Resources, Lansing. USA.
- Payton, M. E., M. H. Greenstone, and N. Schenker. 2003. Overlapping confidence intervals or standard error intervals: what do they mean in terms of statistical significance? *Journal of Insect Science* 3:34.



Figure 1. Bear management units open to hunting in Michigan, 2010.

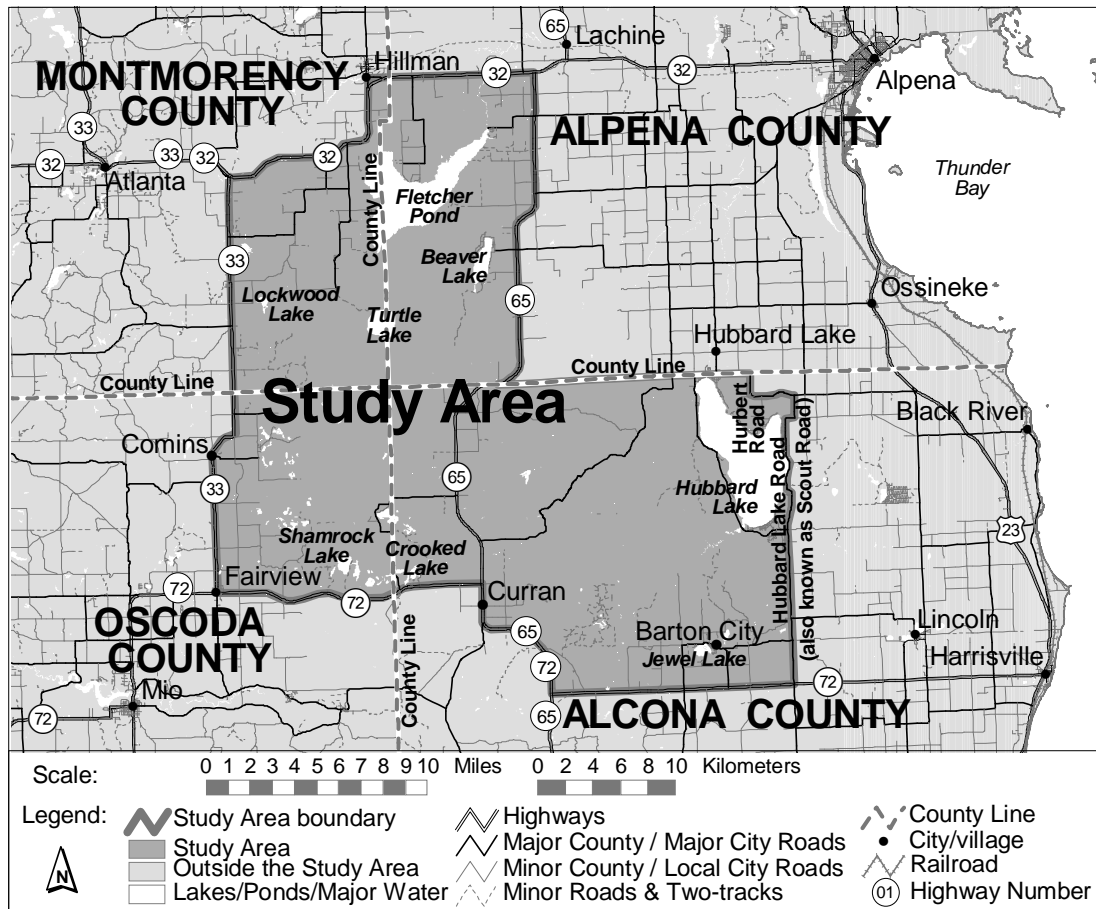


Figure 2. Study area (shaded) within the Red Oak BMU in Michigan.

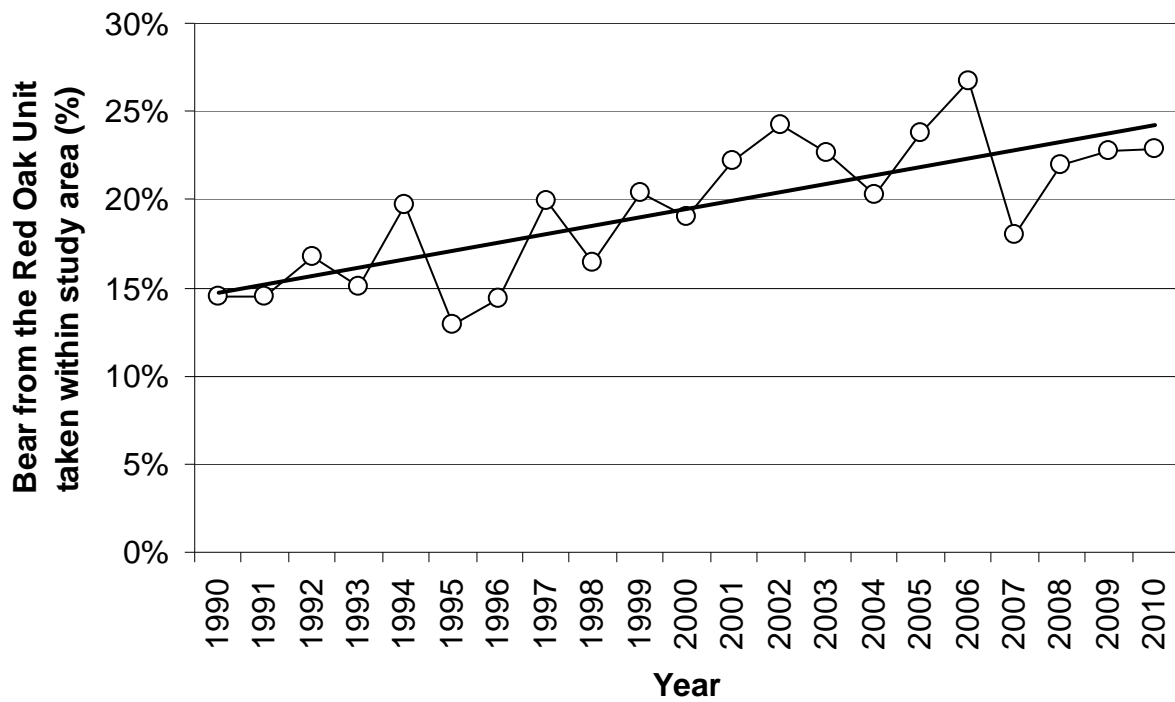


Figure 3. Proportion of bear taken in the Red Oak Bear Management Unit originating from the study area.

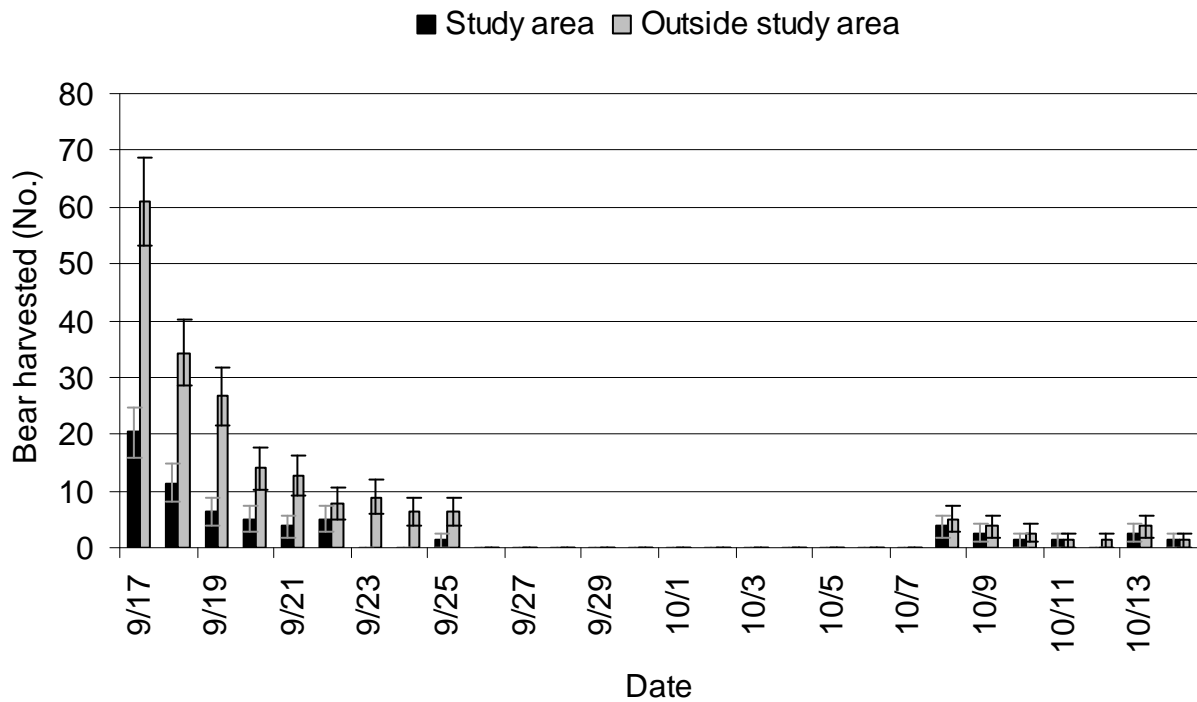


Figure 4. Estimated number of bear harvested in the Red Oak BMU by date during the 2010 bear hunting season (September 17-25 and October 8-14). Estimates presented separately for harvest within and outside the study area.

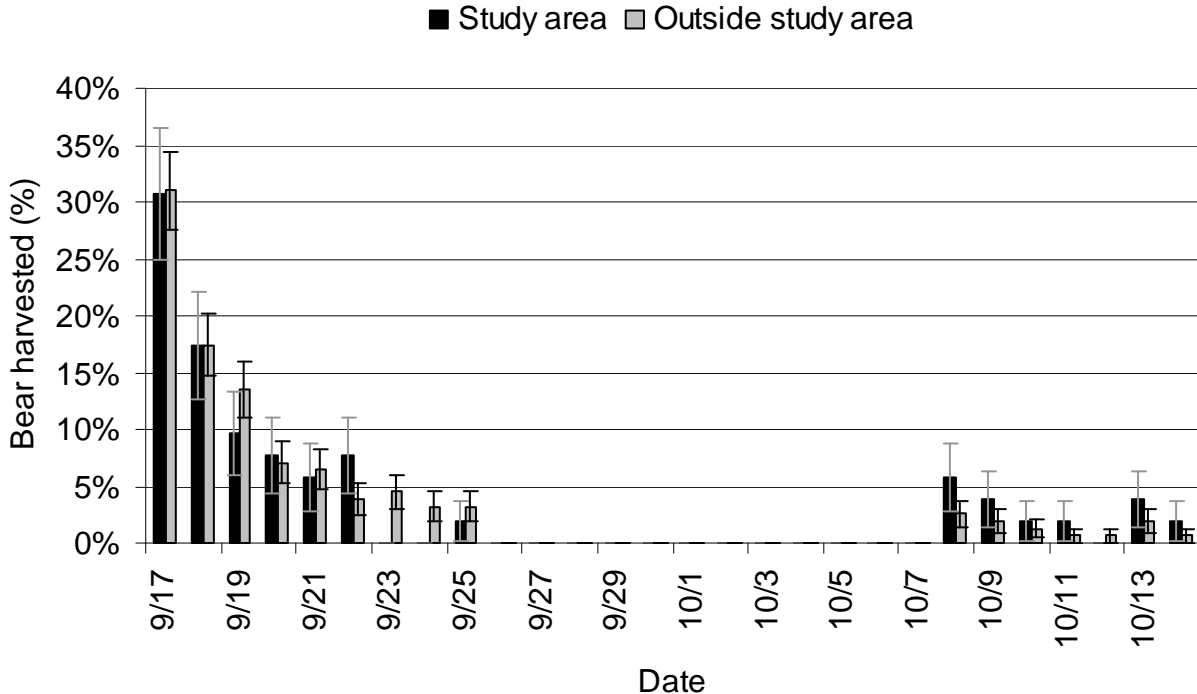


Figure 5. Estimated proportion of bear harvested in the Red Oak BMU by date during the 2010 bear hunting season (September 17-25 and October 8-14). Estimates presented separately for harvest within and outside the study area.

Table 1. Estimated number of hunters, harvest, hunter success, hunting effort, mean days hunted, and mean effort per harvested bear during the 2010 Michigan bear hunting season in the Red Oak BMU.

Area	Hunters		Harvest		Hunter success		Hunting effort		Days hunted per hunter (\bar{x})		Days hunted per harvested bear (\bar{x})	
	No.	95% CL ^a	No.	95% CL ^a	%	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a
Inside study area	202	13	66	8	33	3	1,075	88	5.3	0.3	16.3	1.9
Outside study area	681	13	197	13	29	2	3,437	123	5.0	0.2	17.5	1.1
Red Oak BMU ^b	859	7	263	14	31	2	4,512	126	5.3	0.1	17.2	1.1

^a95% confidence limits.

^bArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area.

Table 2. Estimated number and proportion of hunters hunting on private and public lands during the 2010 bear hunting season.

Management unit	Land type															
	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Inside study area	171	12	85	3	25	5	13	2	3	2	1	1	3	2	1	1
Outside study area	284	14	42	2	254	14	37	2	93	9	14	1	51	7	7	1
Red Oak BMU ^a	433	15	50	2	270	14	31	2	103	10	12	1	53	7	6	1

^aArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area.

Table 3. Estimated number of days of hunting effort on private and public lands during the 2010 Michigan bear hunting season.

Management unit	Land type							
	Private lands		Public lands		Both private and public lands		Unknown	
	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
Inside study area	929	83	114	28	14	12	18	16
Outside study area	1,452	94	1,423	97	496	65	66	25
Red Oak BMU ^a	2,381	114	1,537	100	510	66	84	30

^aArea inside and outside study area combined. Column totals may not equal management unit totals because of rounding errors.

Table 4. Estimated bear harvest in Red Oak BMU on private and public lands during the 2010 bear hunting season, summarized by area.

Ownership	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Private	88	4	58	8	48	4	94	9	58	3	152	11
Public	12	4	8	3	52	4	103	10	42	3	110	10

Table 5. Sex of bears harvested in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Ownership	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Male	56	6	37	6	52	4	103	10	53	3	140	11
Female	44	6	29	5	48	4	94	9	47	3	123	11

Table 6. Equipment used to hunt bear in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Equipment	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Firearm	86	2	174	12	82	1	560	15	83	1	714	13
Bow ^a	27	3	55	7	31	2	214	13	30	2	256	14
Crossbow	11	2	22	5	11	1	72	8	10	1	89	9
Unknown	1	1	1	1	0	0	1	1	0	0	3	2

^aIncluded recurve, compound, and long bows.

Table 7. Equipment used to harvest bear in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Equipment used to harvest bear	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Firearm	81	5	53	7	84	3	165	12	83	2	218	13
Bow ^a	17	5	11	3	13	2	25	5	14	2	37	6
Crossbow	2	2	1	1	3	1	6	3	3	1	8	3
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

^aIncluded recurve, compound, and long bows.

Table 8. Hunting methods used to locate and attract bears in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Primary hunt method	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bait only	97	1	197	13	88	1	596	15	90	1	769	11
Dogs only	1	1	1	1	4	1	24	5	3	1	25	5
Dogs & bait	2	1	4	2	6	1	43	7	5	1	47	7
Other	0	0	0	0	1	0	10	3	1	0	10	3
Unknown	0	0	0	0	1	0	8	3	1	0	8	3

Table 9. Hunting methods used to harvest bears in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Hunt method when bear harvested	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bait only	94	3	62	8	80	3	157	12	84	2	220	13
Dogs only	4	2	3	2	11	2	22	5	9	2	24	5
Dogs & bait	2	2	1	1	6	2	13	4	5	1	14	4
Other	0	0	0	0	3	1	5	2	2	1	5	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Table 10. Bear hunter success in the Red Oak BMU, summarized by primary hunting method used and area hunted.

Hunt method	Area					
	Study area		Outside study area		Red Oak BMU	
	%	95% CL ^d	%	95% CL ^d	%	95% CL ^d
Bait only	32	3	28	2	29	2
Dogs only	100	0	63	10	65	10
Dogs & bait	33	25	35	7	35	7
Other	0	0	25	14	25	14
Dogs ^a	50	23	45	6	46	6

^aCombined hunters using dogs only and hunters using dogs and bait.

Table 11. Proportion and number of bear hunters satisfied with the number of bear seen, opportunities to take a bear, and their overall bear hunting experience in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Hunters rating	Area											
	Study area				Outside study area				Red Oak BMU ^a			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bear seen - very good or good hunt rating	28	3	57	7	27	2	181	12	27	2	234	13
Bear seen - poor or very poor hunt rating	42	4	84	9	44	2	302	14	43	2	373	15
Opportunities to take bear - very good or good hunt rating	31	4	63	8	22	2	150	11	24	1	207	13
Opportunities to take bear - poor or very poor hunt rating	43	4	88	9	45	2	306	15	44	2	381	15
Overall hunt - very good or good hunt rating	47	4	94	9	43	2	294	14	44	2	381	15
Overall hunt - poor or very poor hunt rating	17	3	63	8	35	2	239	14	34	2	293	14

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

Table 12. Proportion and number of bear hunters interfered by other hunters in the Red Oak BMU during the 2010 bear hunting season, summarized by area.

Hunters response	Area											
	Study area				Outside study area				Red Oak BMU ^a			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Interfered by another hunter	21	3	42	6	31	2	208	13	28	2	242	14
Interfered by another bear hunter	11	2	22	5	23	2	160	12	21	1	178	12

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

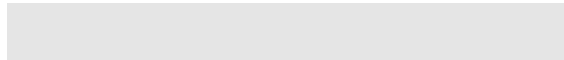
Appendix A

2010 Michigan Bear Harvest Questionnaire for the Red Oak BMU



MICHIGAN BEAR HARVEST REPORT (RED OAK UNIT)

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



It is important that you answer these questions even if you did not hunt or harvest a bear. You were selected to receive this survey because you purchased a 2010 bear hunting license valid for the Red Oak Management Unit in the northern Lower Peninsula.

1. Did you hunt bear in the Red Oak Management Unit during the 2010 season?

¹ ☐ Yes ² ☐ No; (If you select "No", you are finished. Please return the survey.)

2. Did you hunt bear using a firearm, crossbow, or bow during the 2010 bear season?
(please check all that apply)

¹ ☐ Firearm ² ☐ Crossbow ³ ☐ Bow (recurve, compound, or long bow)

3. What hunting method did you use most often when hunting bear during the 2010 bear season? (please select only one item)

¹ ☐ Hunted over bait only ² ☐ Used dogs only (bait not used)
³ ☐ Used dogs started over bait ⁴ ☐ Used other methods not involving dogs or bait

4. If you used bait to attract bears, what was the total number of gallons you used during the legal baiting and hunting periods? (Please write in the gallons used.)

Gallons

5. Did you kill a bear and put your kill tag on it? (If no, please skip to question 7.)

¹ ☐ Yes ² ☐ No

6. If your harvest tag was put on a bear, please fill in the information below

a. What date was the bear harvested?

(please check [X] the box for the date of harvest)

September 2010						
S	M	T	W	T	F	S
					17	18
19	20	21	22	23	24	25

October 2010						
S	M	T	W	T	F	S
					8	9
10	11	12	13	14		

b. What was the sex of the bear?

¹ ☐ Male

² ☐ Female

³ ☐ Not sure

c. In what county was it harvested? (Please write in the county name.)

d. On what type of land was the bear harvested?

¹ ☐ Private

² ☐ Public

e. What weapon was used to harvest bear?

¹ ☐ Firearm

² ☐ Crossbow

³ ☐ Bow (recurve, compound, or long bow)

f. What was the method of harvest?

¹ ☐ Taken over bait

² ☐ Used dogs only (bait not used)

³ ☐ Used dogs started over bait

⁴ ☐ Used other methods not involving dogs or bait

7. Did other hunters interfere with your bear hunting?

¹ ☐ Yes

² ☐ No (Skip to question 9.)

8. If you answered "yes" to the previous question, was the interference caused by other bear hunters?

¹ ☐ Yes

² ☐ No

9. How would you rate the following for your 2010 bear hunting season:

(Select one choice per item.)

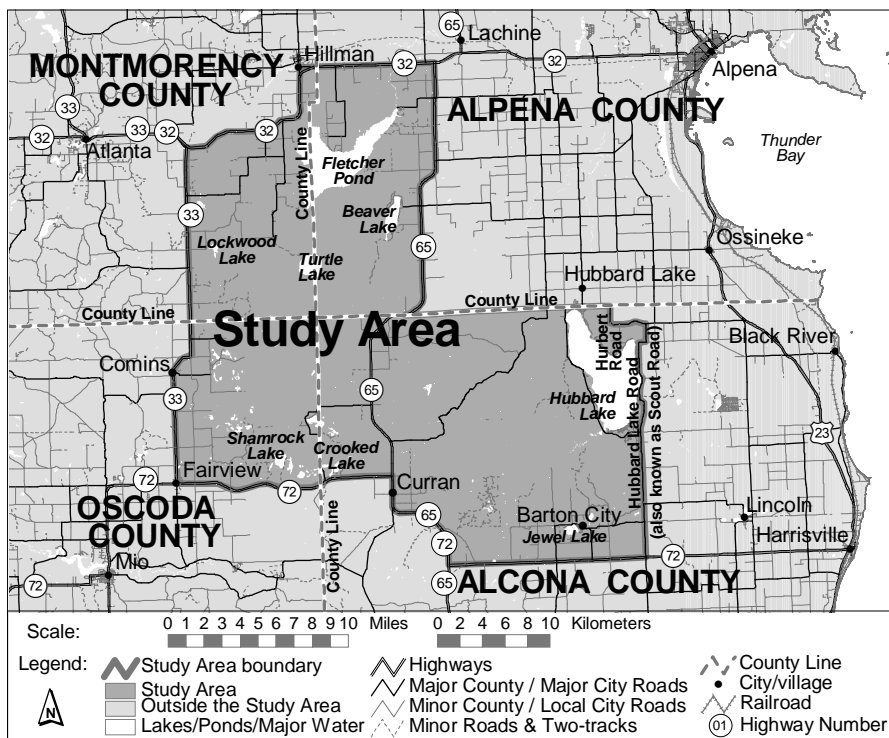
a. Number of bear you saw.

	Very Good	Good	Neutral	Poor	Very Poor	Not Applicable
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	

b. Number of opportunities you had to take a bear.

c. Your overall bear hunting experience.

For the next three questions, we want to find out how often you may have hunted bear inside the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



10. Did you hunt bear inside the study area outlined on the map during the 2010 season?

¹ ☐ Yes ² ☐ No; skip to question 13.

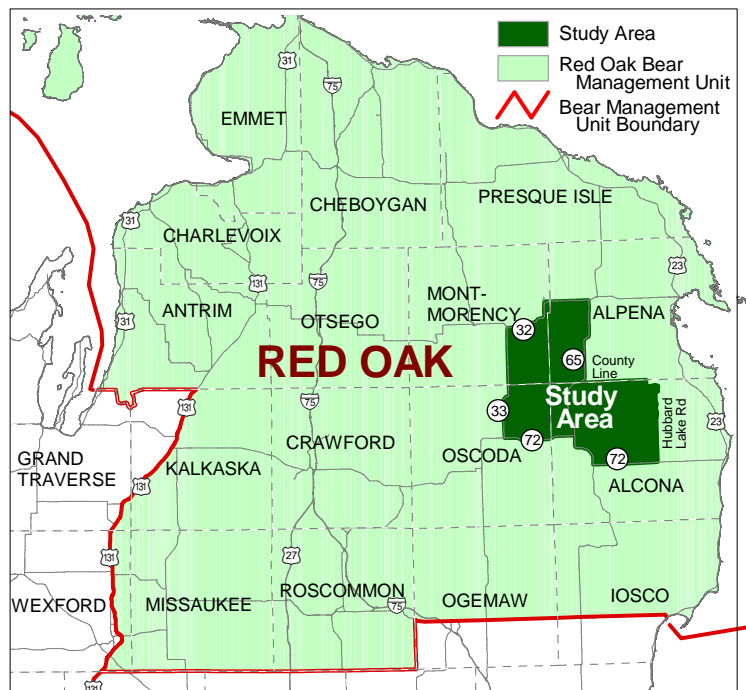
11. If you hunted inside this study area, please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (List each county that you hunted for bear inside the study area)	NUMBER OF DAYS HUNTED	TYPE OF LAND
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both

12. Did you harvest a bear inside the study area outlined on the figure?

¹ ☐ Yes ² ☐ No

For the final two questions, we want to find out how often you may have hunted bear outside the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



13. Did you hunt bear outside the study area shown on the figure during the 2010 season?

- ¹ ☐ Yes ² ☐ No; skip the final question if you did not hunt outside study area.

14. If you hunted outside of the study area outlined on the figure, please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (List each county that you hunted for bear <i>outside</i> the study area)	NUMBER OF DAYS HUNTED	TYPE OF LAND
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both

Please return questionnaire in the enclosed postage-paid envelope.

Thank you for your help!

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